

2029 Aluminum Analyzer

From Metrohm Process Analytics

Aluminum is the most abundant metallic element of the Earth's crust (8%) and is a very reactive base metal. It has low density, high electrical and thermal conductivities and high corrosion resistance. Because of these remarkable characteristics, the metal is commonly used as a building structure material in construction, aircraft and automobile industries. It is also used in the production of metal alloys for semiconductors and as a coagulant in potable water plants to remove organic matter, turbidity and microorganism.

Because of its role in many different production processes, it is of vital importance to closely monitor the concentration. The **2029 Aluminum Process Analyzer** from Metrohm Process Analytics is the most straightforward and easy-to-use tool to do so online.

About the Aluminum application

Al^{3+} is determined photometrically with eriochrome cyanine R which forms a red-violet complex, measured at a wavelength of 572 nm. Al^{3+} reacts with the indicator in weak acid medium. The analyzer is able to handle a wide range of concentrations, from $\mu\text{g/L}$ to mg/L .

Benefits for online analysis

- Protect expensive company assets by monitoring your processes
- Process data available at your fingertips 24/7 means no waiting for slow, manual laboratory methods
- Increased safety for employees – no manual sampling necessary, no exposure to dangerous environments
- Save money by reducing downtime: analyzer sends alarms for out-of-specification values which inform the operator sooner

Al^{3+} analysis performed safely online

- Aluminum can be measured in 1 or 2 sample streams
- Compact footprint for tight industrial spaces: 326 x 273 mm
- Safe, rugged enclosure designed to IP66 specifications is ideal for process environments
- A 7" full color touchscreen shows trend graphs and allows action modifications
- Remote access and control via Ethernet and Modbus TCP/IP, with USB for data export
- Easy maintenance due to simplicity of the layout
- Automatic data and/or alarm transfer to a DCS system



Applications for Al^{3+}

- ... in drinking water treatment / (potable water)
- ... in wastewater treatment plants/ (environmental)
- ... in WWTP for power generation / (Energy/power)
- ... in polymer (MDI) production / (chemical)
- ... in electronics «etching» process / (semiconductor)
- ... in aircraft production / (steel/metal)

